FORM PTO-1449 MATERIAL INFORMATION STATEMENT

216124.1

SERIAL NO. 08/323,060 ATTY, DOCKET NO. OMRF128 APPLICANT Philip C. Comp GROUP 1816 FILING DATE October 14, 1994

				U.S. PATENT DOCUMENTS			1995
EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE  IF APPROPRIATE
935	AA	5,084,273	01/28/92	Hirahara	424	94.6	
(B)	AB	5,093,117	03/03/92	Lawrence, et al.	424	85.8	
	AC						
	AD						
	AE						
	AF			·			
	AG	-					
-	AH			`\			
	AI						
	AJ	<del></del>					
	AK						
			<u> </u>	FOREIGN PATENT DOCUMENTS			<u>.                                    </u>
İ		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION
		DOCUMENT NUMBER	DAIL	0001111		0000033	YES NO
N3)	AL	WO 94/22470	10/13/94	PCT			
	AM		,				
	AN						
	AO						
	AP		]				
		*	OTHER PRIOR	ART (Including Author, Title, Date, Pertine	nt Pages, Etc.)		
M	AR .	AR Bauer, K.A. and R.D. Rosenberg, "Congenital antithrombin III deficiency: insights into the pathogenesis of the hypercoagulable state and its management using markers of hemostatic system activation," Am.J.Med. 87:39S-43S (1989)					
143/	AS	AS Bauer, K.A. and R.D. Rosenberg, "Role of antithrombin III as a regulator of in vivo coagulation," Semin.Hematol. 28:10-18 (1991)					
	AT Broze, G.J., Jr., et al., "The lipoprotein-associated coaquilation inhibitor," Prog.Hemost.Thromb. 10:243-268 (1991)						
RVI	AT	Broze, G.J., Jr.,	et al "The lipop	rotein-associated coaquilation inhibitor." Pr	oa.Hemost.Thro	mb. 10:243-26	8 (1991)

SERIAL NO U.S. DEPARTMENT OF COMMERCE ATTY. DOCKET NO. FORM PTO-1449 08/323,060 OMRF128 PATENT AND TRADEMARK OFFICE MATERIAL INFORMATION STATEMENT APPLICANT SED Philip C. Comp (Use several sheets if necessary) GROUP FILING DATE 1806 October 14, 1994 OTHER PRIOR ART (Including Author, Title, Date, Pertinent Pages, Etc.) Broze, G.J., Jr., et al., "Regulation of coagulation by a multivalent Kunitz-type inhibitor," Biochemistry. 29:7539-7546 (1990) M, ( AR Chesebro, James H., et al., "Antithrombotic Therapy and Proression of Coronary Artery Disease," Circulation Supplement III. Mi AS 86(6):III-100-!!!-110 (1992) Clouse, L.H. and Comp. P.C., "The regulation of hemostasis: The protein C system," N. Engl. J. Med. 314(20):1298 (1985) AT AN! Comp. P.C. and Esmon, C.T., "Generation of fibrinolytic activity by infusion of activated protein C into dogs." J. Clin, Invest. 68:1221 AR W (1981)Comp. P.C., et al. "Familial protein S deficiency is associated with recurrent thrombosis," J. Clin. Invest. 74:2082-2088 (1984) M1 AS J(4) Comp. P.C., et al., "Activation of protein C in vivo." J.Clin.Invest. 70: 127-134 (1987) ΑT Comp. P.C., "Hereditary disorders predisposing to thrombosis," In B.S. Coller (Ed.), Progress in Hemostasis and Thrombosis, (New AR My York: Grune and Stratton, 1986). Vol. 8, pp. 71-102 W( Conway, E.M. and R.D. Rosenberg, "Tumor necrosis factor suppresses transcription of the thrombomodulin gene in endothelial AS cells," Mol.Cell.Biol. 8:5588-5592 (1988) Cooper, D.K.C., et al., "The Pig as Potential Organ Donor for Man," Chapter 30, 481-500 AT MH Dahlback, B., "Interaction between vitamin K-dependent protein S and the complement protein, C4b-binding protein, A link between AR NAN coagulation and the complement system," Semin. Thromb. Hemost. 10:139-148 (1984) Dahlback, B., "Inhibition of protein Ca cofactor function of human and bovine protein S by C4b-binding protein." J.Biol.Chem. MI AS 261:12022-12027 (1986) Dahiback, B., "Interaction between complement component C4b-binding protein and the vitamin K-dependent protein S. A link M31 ΑT betwigen blood coagulation and the complement system," Scand.J.Clin.Lab.Invest.[Suppl] 177:33-41 (1985) de Fouw, N.J., et al., "The cofactor role of protein S in the acceleration of whole blood clot lysis by activated protein C in vitro." AR NB 1 Blood 67:1189-1192 (1986) Esmon, C.T., et al., "Interaction of thrombin with thrombomodulin," Ann. N.Y. Acad. Sci. 485: 215 (1986) AS MB.

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Esmon, C.T., The roles of protein C and thrombomodulin in the regulation of blood coagulation. J. Biol. Chem. 264(9): 4743.

DATE CONSIDERED

11/20/27

√Wh)

**EXAMINER** 

AT

Sheet 3 of 5 7

FORM PTO-1449  U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE MATERIAL INFORMATION STATEMENT (Use several sheets if nocessary)			ATTY, DOCKET NO. OMRF128	SERIAL NO. 08/323,060				
			APPLICANT Philip C. Comp	3 190r				
	(0	,	FILING DATE October 14, 1994	GROUP 1816 405				
		OTHER PRIOR ART (Including Autho	r, Title, Date, Pertinent Pages, Etc	£) .				
P)	AR	Esmon, N.L., "Thrombomodulin," Semin.Thromb.Hemo	st. 13:454-463 (1987)					
N31	AS	Flaherty, M.J., et al. "latrogenic immunization with boy Int. Med. 111: 631 (1989)	Flaherty. M.J., et al. "latrogenic immunization with bovine thrombin: A mechanism for prolonged thrombin times after surgery." Ann Int. Med. 111: 631 (1989)					
bri	AT	Flaherty, M.J. and Wener, M.H "Antibodies to thromb	Flaherty, M.J. and Wener, M.H., "Antibodies to thrombin in postsurgical patients," Blood 73(5):1386 (1989)					
MM	AR	Fulcher, C.A., et al., "Proteolytic inactivation of human with V," Blood 63:486-49 (1984)	Fulcher, C.A., et al., "Proteolytic inactivation of human factor VIII procoagulant protein by activated human protein C and its analogy with V," Blood 63:486-49 (1984)					
M	AS	Hillarp, A. and B. Dahlback, "The protein S-binding site 262:11300-11307 (1987)	Hillarp, A, and B, Dahlback, "The protein S-binding site localized to the central core of C4b-binding protein," <i>J,Biol.Chem.</i> 262:11300-11307 (1987)					
M,	AT	Kirkman, Robert L., "Of swine and men: organ physiole Science Publishers (Biomedical Division)	ogy in different species." <i>Xenograf</i> i	? 25 Mark A. Hardy (Ed.). 1989 Elsevier				
MI	AR	Kisieł, W., et al., "Anti-coaquiant properties of bovine (	olasma protein C following activation	on by thrombin." Biochemistry 16: 5824				
R	AS	Kisiel, W., "Human plasma protein C: Isolation, charact 761 (1979)	Kisiel, W., "Human plasma protein C: Isolation, characterization and mechanism of activation by alpha-thrombin," J. Clin. Invest. 64 761 (1979)					
W37	АТ	Lentz, S.R., et al., "Regulation of thrombomodulin by tumor necrosis factor-alpha; comparison of transcriptional and post-transcriptional mechanism," Blood 77:542-550 (1991)						
w	AR	Marlar, R.A., et al., "Human protein C; inactivation of f	actors V and VIII in the activated r	molecule.* Ann.NY.Acad.Sci. 370:303-10				
M	AS	Melissari and Kakkar, "Congenitat severe protein C deficiency in adults," Br. J. Haematol. 72(2):222-228 (1989)						
DP/	AT	Menache, D., "Antithrombin III: introduction." Semin.Hematol. 28:1-2 (1991)						
m	AR	Miletich, J.P., "Laboratory diagnosis of protein C defici-	ency." Semin. Thromb. Hemost. 10	6(2):169 (1990)				
_	·							
VII,	AS	Miletich, J., et al., "Absence of thrombosis in subjects	with heterozygous protein C deficie	ency." N. Enal. J. Med. 317(16):991 (1987)				
KB/	AT	Moore, K., et al., "Endotoxin enhances tissue factor and suppresses thrombomodulin expression of human vascular endothelium in vitro," J.Clin.Invest. 79:124-130 (1987)						
EXAMINE	R .	1 ( 0	DATE CONSIDERED .	1/20/05				

				Sheet 4 of 5			
FORM PTO-1449 U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE			ATTY, DOCKET NO. OMRF128	SERIAL NO. 08/323,060			
MA		L INFORMATION STATEMENT  several sheets if necessary)	APPLICANT Philip C. Comp	\$80 1 A SED			
			FILING DATE October 14, 1994	GROUP (81)			
		OTHER PRIOR ART (Including A	Author, Title, Date, Pertinent Pages, E	tc.)			
RPs/	AR	Moore, K.L., et al., "Turnor necrosis factor leads to aortic endothelial cells in culture Indianapolis," Bk		of thrombomodulin from the surface of bovin			
pm	AS	Muller, James E., "Coronary Artery Thrombosis: Historical Aspects," J. Am. Coll. Cardiol. ((3):893-896 (1983)					
YLM S	AT	Nawroth, P.P., et al., "Interleukin 1 induces endott Proc.Natl.Acad.Sci.USA 83:3460-344 (1986)	heliat cell procoagulant while suppress	sing cell-surface anticoagulant activity."			
MI	AR	Nawroth, P.P. and D.M. Stern, "Modulation of end 745 (1986)	Nawroth, P.P. and D.M. Stern, "Modulation of endothelial cell hemostatic properties by tumor necrosis factor," <i>J.Exp.med.</i> 163;746 (1986)				
W)	AS	Owen, W.G. and Esmon, C.T., "Functional propert Biol. Chem. 256:5532 (1981)	ies of an endothelial cell cofactor for t	thrombin-catalyzed activation of protein C."			
אינוע	AT	Preissner, K.T., "Biological relevance of the protein Clin. Sci. 78: 351, 1990	in C system and laboratories diagnosis	s of protein C and protein S deficiencies."			
MY	AR	Rapaport, S.I., "Inhibition of factor VIIa/tissue factor inhibitory mechanism 92013," Blood 73:359-365 (		ticular emphasis upon a factor Xa-depende			
hu	AS	Rapaport, S.I "The extrinsic pathway inhibitor: a (1):6-15 (1991)	regulator of tissue factor-dependent t	olood coaquilation." Thromb.Haemost. 66			
M	AT	Snow, T.R., et al., "Protein C activation following coronary artery occlusion in the in situ porcine heart." Circulation 84:(1): 293  (1991)					
W) (	AR	Steams, D.J., et al., "The interaction of a Ca <sup>2*</sup> -dependent monoclonal antibody with the protein C activation peptide region.  Evidence for obligatory Ca <sup>2*</sup> binding to both antigen and antibody," <i>J. Biol. Chem.</i> 263: 826-832 (1988)					
Nr/	AS	Stricker, R.B., et al., "Development of antithrombin antibodies following surgery in patients with prosthetic cardiac valves." Blood 72(4):1375 (1988)					
IB)	AT	Taylor, F.B., et al., "Protein C prevents the coaqui Invest 79: 918 (1987)	lopathic and lethal effects of Escheric	thia coll infusion in the baboon." J. Clin.			
$\sqrt{N_1}$	AR	Tripodi, A., et al., "Asymptomatic homozygous pro	otein C deficiency.* Acta, Haematol. 8:	3: 152 (1990)			
Wy.	AS	Tuddenham, E.G., et al., "Homozygous protein C 475 (1989)	deficiency with delayed onset of symm	ptoms, at 7 to 10 months." Thromb, Res. 53			
m,	AT	Walker, F.J., "Protein C deficiency in liver disease	." Ann. Clin. Leb. Sci. 20(2):106 (199	90)			

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

DATE CONSIDERED

11/20185-

EXAMINER

heet 5 of 5

FORM PTO	-1449	U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE	ATTY, DOCKET NO. OMRF128	SERIAL NO. 08/323,060 / 9			
MAT		L INFORMATION STATEMENT several sheets if necessary)	APPLICANT Philip C. Comp	1995			
·	. (USE	SOVERE SHOULS & HOURSSARY)	FILING DATE	GROUP . JUS			
			October 14, 1994	1996 181b			
		OTHER PRIOR ART (Including Autho	r, Title, Date, Pertinent Pages, Etc	·)			
DAI	AR	Walker, F.J., Scandella, D. and Fay P.J., "Identification VIII," J. Biol. Chem. 265(3):1484-89 (1990)	of the binding site for activated p	rotein C on the light chain of factors V and			
Amc	AS	Walker, F.J., "Regulation of activated protein C by pro 256:11128-11131 (1981)	Walker, F.J., "Regulation of activated protein C by protein S. The role of phospholipid in factor Va inactivation," J.Biol.Chem. 256:11128-11131 (1981)				
<b>√</b> B)	ΑŤ	Walker, F.J., "Protein S and the regulation of activated	Walker, F.J., "Protein S and the regulation of activated protein C." Semin. Thromb. Hemost, 10:131-138 (1984)				
<b>V</b> B/	AR	Walker, F.J., "Interactions of protein S with membranes," Semin. Thromb. Hemost. 14:216-221 (1988)					
Mγ	AS	Walker, F.J., et al., "Inactivation of factor VIII by activa	sted protein C and protein S." Arch	.Biochem.Biophys. 252;322-328 (1987)			
V"	AT	Walker, F.J., "Regulation of activated protein C by a no	ew protein. A possible function for	bovine protein S." J.Biol,Chem. 255:5521			
	AR						
	AS						
	AT						
•	AR						
	AS						
	АТ	•					
	AR						
	AS						
	AT						
EXAMINE	 R	W	DATE CONSIDERED	nlzular			
*EXAMIN	ER: Ir	itial if reference considered, whether or not citation is in confind not considered. Include copy of this form with next comm	formance with MPEP 609; Draw line	n (2)   a r			